A Case Study - The Cassegrain Experience

"I guarantee you can taste the difference! Come down to the cellar." The first sign was the darker colour, then the sweeter fruitier bouquet, but the real test came with the taste. The biodynamically grown "Reserve" Chambourcin tasted, delightfully fuller, and smoother than the conventionally grown Chambourcin. Same winery, same variety, different cultivation, completely different taste.

Now wine tasting is a personal affair, but this wine has received local and international acclaim. In April this year Bob Carr and friends sat down to a $300 a head meal at the official opening of the Vin International expo in Sydney. The wine I had just tasted was one of six wines chosen from a world-wide selection to be served at the dinner. "We hereby acknowledge that this wine, of this vintage, is genuinely among the elite wines of the world." wrote the judges from the Intervin International Award of North America.

"How do you do it?", I fired at the viticulture expert. Would he tell me the Cassegrain secrets? Ludwig Mueller smiled and calmly responded "Come and see." As we drove past vineyards, "this one is conventional, this one chemical-free for one year, this for two years, ..." he was saying. I wasn't listening. I was reflecting on that beautiful fruity taste, still washing around in my memory. What had he said?, "We don't just taste the difference we sell the difference."

The sound of a shovel brought me back. "This is what we started with." I peered at the shallow, pale soil in the hole. Then with obvious pride he strode a couple of metres into the vineyard and this time his shovel revealed a deep, dark soil matted with roots.

He explained how the native forest had to be cleared to ensure a pollution-free soil. But the analysis showed the soil was deficient in all major nutrients, with a pH of 3.5. This soil needed some help. First crushed limestone was incorporated into the soil to reduce the acidity to its current pH of 6. Next composted animal manures and Alroc Mineral Fertiliser were spread to provide nutrients.

Trying not to show my ignorance I said "Ludwig, I have heard of Alroc. But how can crushed rock help?"

"Since soil forms from rock in the first place, we can improve poor (or overworked) soil by adding specific types of rock-dust chosen for their mineral content. The volcanic basalt, granite, dolomite, rock phosphate and rock potash, in the Alroc, slowly release a complete spectrum of minerals and trace elements which provides the perfect environment for natural farming," explained Ludwig.

Micro-organisms decompose rock-dust from the surface of tiny Alroc particles and combine this with organic matter to form humus. The rejuvenated soil supports an enormous variety of soil organisms, some of which capture nitrogen from the air and make it available to plants. The plants grow nutrient-rich and withstand pest and disease infestations much better. Because the plants develop an extensive feeder root system, they are also better able to withstand dry spells. By using Alroc we can work with natural processes to produce chemical-free wine or any food for that matter.

"And the pests and diseases really leave you alone?" I asked doubtfully. "The pests are part of the ecology we work with so they don't leave us alone completely, but they cause much less of a problem. In fact, the climate at Port Macquarie is very wet compared to other wine growing areas in Australia and is an ideal environment for fungal diseases and pests to cause problems. So I have developed many non-chemical strategies to cope, including the choice of vine varieties, pruning techniques to facilitate air flow and the sun's penetration, inoculating the soil with beneficial fungi and microbes which help to fight problematic fungi, and also some natural sprays. But the biggest defence is the plants' own natural immunity, imparted by their vigour and health."

I could not help but admire Cassegrain and its knowledgeable workforce as I realised how against the odds with unsuitable soil and climate they have produced award winning wines. Huon Hooke wrote in "Good Living" in the Sydney Morning Herald "Up at the Cassegrain Winery at Port Macquarie, an apparent paradox has been discovered. The healthiest grapes come from a vineyard that has the least chemical protection against moulds and mildews." A 14 month shelf-life test in a cool room has revealed good resistance to mould of this fruit in comparison with conventionally produced fruit of the same variety.

"Because of the fruits' complex nutrient balance, the fermentation process is slower giving the winemaker more time to extract the best colour and flavours from the grapes. The higher sugar content of the fruit allows the winemaker to produce a higher alcoholic content which increases the wine's shelf life." says Ludwig as we drive to the next vineyard.

"Remember, Australia is a very old continent. The soils are leached and often thin. To protect the precious soil, I use a cover-crop of white clover and a low growing rye grass growing between the rows. Mowing once a month adds organic matter to the soil. A recent petiole analysis showed that the plants and hence the soil has no deficiencies - trace element or macro-nutrient."

"You know these methods could be used with any crop" Ludwig announced.

"Let's head back to the cellar Ludwig you can tell me more in the cool," I suggested, hoping for another tasty sample.

If you want good wine, I can recommend Cassegrain Winery at Port Macquarie (02) 65837777. If you want good advice, I can recommend Ludwig Mueller- natural farming consultant, who is offering his services to winegrowers (02) 65850381(a.h.). If you want a good soil improver, I can recommend Alroc Mineral Fertiliser (02) 49773686 or 019 647257.